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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,041	03/12/2004	Ga-Lane C. Chen		8587
25859	7590	10/06/2004		
WEI TE CHUNG FOXCONN INTERNATIONAL, INC. 1650 MEMOREX DRIVE SANTA CLARA, CA 95050			EXAMINER LAM, HUNG H	
			ART UNIT 2615	PAPER NUMBER

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,041

Applicant(s)

CHEN, GA-LANE C.

Examiner

Hung H. Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh et al. (US-2004/0150062) in view of Anderson (US-6,563,535).

As to claim 1, Hsieh et al. disclose an image sensor module (section 0009), comprising a camera lens with a non-spherical surface (convex portion 66; Fig. 2; section 0022, line 10) and an image sensor (Fig. 3, chip 44) for

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transforming optical signals to analog signals (section 0020 and 0023) wherein the camera lens is spaced apart from the image sensor (Figs. 2 and 3), where in the camera lens is spatially fastened to the image sensor (section 0022, lines 10-12).

Claim 1, differs from Hsieh in that the claim further requires DSP, MCU, DRAM, and a circuitry for connecting the image sensor module, DSP, MCU, DRAM, and the output apparatus. However, the limitations are well known in the art as taught by Anderson.

In the same field of endeavor, Anderson teaches a digital camera comprising: a digital signal processor for transforming analog signals to digital signals (digital signal processor 106; Fig.1; col. 4, line 12); a micro control unit for processing the digital signals out from the DSP (CPU 110, Fig. 1; col. 4, line 37); a dynamic random access memory for storing data (col.4, line 40); an output apparatus (col.4, line 49); and a circuitry for connecting the image sensor module, the DSP, the MCU, the DRAM and the output apparatus together (Fig.1). In light of the teaching from Anderson, it would have been obvious to one of ordinary skill in the art at the time the invention was made to process the output of the image sensor module of Hsieh et al. as claimed. The modification thus provides an image processing system for high performance digital imaging in digital cameras (Anderson col.2 lines 24-26).

As to claim 2, Hsieh does not specifically teach the image sensor as shown in figures 2-3 includes an IR septum. However, Hsieh teaches that it is

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well known in the art that to have an IR filter within an image sensor module (Fig. 1, filter 28; section 0004). The additional infrared membrane would allow the optical signal passing through and filter out the infrared component of the incident light.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an IR septum in the image sensor module shown in figure 3 of Hsieh.

Regarding claim 3, Hsieh et al. include a lens part (frame layer 42, Fig. 2)

Regarding claim 4, Hsieh et al. disclose the camera lens which includes a mounting part (surface 60, frame layer 42; Fig. 3; section 0022, lines 10-13).

Regarding claim 5, Hsieh et al. disclose a camera lens wherein the infrared septum is plating on a face of the mounting part (Fig. 1).

Regarding claim 6, Hsieh et al. disclose an image sensor, which further includes several sensitization elements (46) and an underlay (section 0019, lines 1-2; section 0020, lines 1-3).

Regarding claim 7-8, Hsieh et al. disclose the digital camera wherein the camera lens is fixed to the image sensor by hot mold glue (section 0022, lines 10-12). Hsieh et al. fails to teach 353ND epoxy as his hot mold glue. Official

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notice is taken that 353ND epoxy glue is well known for high temperature epoxy and packaging optical image sensing integrated circuit and expected in the art. It would have been obvious to bond the camera lens to the image sensors using 353ND epoxy.

Regarding claim 9, all the limitations are contained in claim 1 except for the limitation that the camera lens with spatially fastened to the image sensor. However, Hsieh does teach that limitation (section 0022, lines 10-12).

Regarding claim 10, Hsieh et al. disclose a method of capturing a picture, comprising: providing an image sensor module with a camera lens, which defines a non- spherical surface (convex portion 66; Fig. 2; section 0022, line 1), and an image sensor (sensor 44, Figs. 2-3) for transforming optical signals to analog signals (section 0009, lines 1-2), wherein the camera lens is spatially fastened to the image sensor (section 0022, lines 10-12). Hsieh et al. fail to disclose the image sensor as shown in figures 2-3 include an IR septum.

However, Hsieh teaches that it is well known in the art to coat an infrared layer upon a back surface of said lens and between a lens and an image sensor (lens 26, infrared filter 28, Fig. 1; section 0004). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to sandwich the infrared layer between the lens and the image as shown in figure 3 of Hsieh et al. The additional infrared membrane would allow the optical signal passing through and filter out the infrared component of the incident light.

Conclusion

This prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

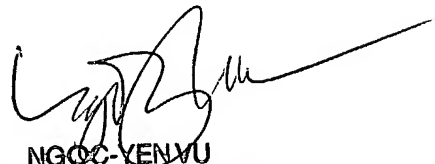
- a) Hong (US-2004/0155974) discloses a method and apparatus for controlling adaptive menu of digital camera.
- b) Son (US-2004/0145863) discloses method of managing data files using voice within portable digital apparatus.
- c) Nakjoh (US-2003/0007084) discloses a small image pickup module.
- d) Foster (US-6285064) discloses chip scale packaging technique for optical image sensing integrated circuits.
- e) Badehi (US-2002/0027296) discloses a method for producing packaged integrated circuit devices and packaged integrated circuit devices produced thereby.
- f) Hsin (US-2004/0150740) discloses a miniaturized image sensor module.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung H. Lam whose telephone number is 7033058143. The examiner can normally be reached on Monday - Friday 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, NGOC YEN VU can be reached on 703-305-4946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/30/2004
HL


NGOC-YEN VU
PRIMARY EXAMINER